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| 09/420,772      | 10/19/1999  | OSAMU YAMADA         | 862.3073            | 3279             |

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FITZPATRICK CELLA HARPER & SCINTO  
30 ROCKEFELLER PLAZA  
NEW YORK, NY 10112

EXAMINER

LE, BRIAN Q

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2623

DATE MAILED: 07/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/420,772

Applicant(s)

YAMADA ET AL

Examiner

Brian Q Le

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,7,12-17 and 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7,12-17 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 October 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

*Continued Prosecution Application*

1. The request filed on May 12, 2003 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 11 is acceptable and a CPA has been established. An action on the CPA follows.

**RESPONSE TO AMENDMENT**

2. Applicant's arguments are directed toward various portions of [Reference's Name] cited by the Examiner. The Examiner points out that the rejections were based upon the entire reference. Therefore, Applicant is urged to consider the reference as a whole. When considering the cited portions within context the whole patent, it is seen that the claimed invention is rendered obvious.

The Applicant argues (page 9) that Miyashita teaches gradation conversion curve and not the saturation conversion. However, Miyashita show the saturation conversion curve on FIGs. 10 and 34.

Also, the Applicant argues (middle of page 9) that Miyashita does not provide the ability to ensure that chromatic color can be prevented from becoming achromatic at the low-saturation side or being saturated at the high-saturation side as a result of saturation conversion. However, nowhere in the claims the Applicant had mentioned this.

In addition, the Applicant (page 10) argues that Miyashita does not teach a generation of saturation conversion characteristic on the basis of conversion lines or curves corresponding to each conversion condition for low-saturation side and high-saturation side. Again, FIGs. 10 and 34 shows this limitation. Further explanation can also be found on column 6, lines 26-30 and column 11, lines 41-46.

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Thus, the rejections of all of the claims are maintained.

*Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1, 3, 4, 7, 12-16, 18 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyashita U.S. Patent No. 6,031,543.

Referring to claim 1, Miyashita teaches an image processing apparatus comprising:

Saturation calculation (saturation correction) unit (FIG. 16) arranged to calculate saturation information of an image;

A saturation conversion characteristic generating unit arranged to generate a saturation conversion characteristic on the basis of conversion lines or curves (FIGs. 10 and 34) corresponding to each conversion condition for low-saturation side and high-saturation side (column 6, lines 26-30 and column 11, lines 41-46), where said saturation conversion

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characteristic shows a relationship between input saturation information and output saturation information (column 11, lines 30-59); and

A saturation conversion unit (FIG 44 and FIG 45) arranged to convert the saturation (column 3, line 40-44) of the image on the basis of the saturation conversion characteristic.

It is inherent that saturation calculation also is saturation correction especially as demonstrated in FIG 16, a saturation correction requires analysis of color and colors saturation conversion.

For claim 3, Miyashita also teaches the apparatus further comprising a conversion condition setting unit arranged to set said each conversion condition for the low-saturation side and the high-saturation side by using the input saturation information (column 10, line 25-60).

Referring to claim 4, Miyashita teaches the apparatus further comprising:  
An instruction unit arranged to make an instruction input by a user (column 3, line 58-60) in order to set each conversion condition for the low-saturation side and the high-saturation side (column 10, lines 22-29).

Referring to claim 7, Miyashita teaches the apparatus wherein the saturation conversion characteristic exhibits a monotonous increase (column 11, line 33-46).

Referring to claim 12, Miyashita discloses the apparatus further comprising:

A detection unit arranged to detect a color distribution of the image (FIG 6, FIG 7 and column 5, line 54);

A generation unit arranged to generate gradation correction information (column 8, line 44-46) of the image on the basis of the color distribution; and

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A gradation correction unit arranged to perform gradation correction of the image on the basis of the gradation correction information (column 8, line 22-29 and column 8, line 52-55).

For claim 13, Miyashita also teaches the apparatus wherein said saturation conversion unit (FIG 44 and FIG 45) performs saturation conversion on an image which has undergone the gradation correction (column 9, line 21-24) by said gradation correction unit. Also it is inherent that gradation correction is required during the gradation conversion process which is clearly described by Miyashita.

Referring to claim 14, Miyashita further teaches the apparatus wherein said generation unit comprises:

A highlight calculation unit (FIG 25, FIG 26A, FIG 26B, FIG 26E and FIG 26F) arranged to calculate highlight area information (column 9, line 25-31) of an image on the basis of the color distribution; and

A white balance calculation unit (FIG 28-115 and 117) arranged to calculate white balance information on the basis of the highlight area information (FIG 29-115 and 117, FIG 30-115 and 117, FIG 31-115 and FIG 32-115) and a predetermined highlight value (column 10, line 24-32, "HL" parameters), and wherein

Said gradation correction unit corrects gradation of the image on the basis of the white balance information and the highlight value (column 10, line 25-44).

It is inherent that highlight and intensity are the white balance calculation. Without these two parameters, white balance calculation can not be processed properly.

Referring to claim 15, Miyashita discloses the apparatus wherein said generation unit comprises:

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A shadow calculation unit arranged to calculate shadow information of an image (FIG 25, FIG26C, FIG26D-FIG26F, FIG28-32); and

A black balance calculation unit (FIG 25, FIG26C, FIG26D-FIG26F and FIG28-116 and 117) arranged to calculate black balance information on the basis of the shadow area information (FIG 28, 116-117; FIG 29, 116-117; FIG 30, 116-117) and a predetermined shadow value (column 10, line 24-32, "SD" parameters), wherein

Said gradation correction unit corrects gradation of the image on the basis of the black balance information and the shadow value (column 10, line 25-44).

It is inherent that shadow and the intensity are also the black calculation. Without these two significant means, black balance calculation can not be determined.

For claims 16 and 18, please refer back to the explanation of claims 1 and 3.

For claim 19, please refer to claim 1 for all the limitation. Furthermore, Miyashita discussed the concept of recording medium (storage system) (column 1, 64-67) that allow program codes (software or executable program) (column 3, line 62-63) to allow user to control the image processing method. Therefore, it is inherent to have a recording medium comprising program codes of an image processing method comprises the limitation of claim 1.

**CONCLUSION**

6. The following patents are cited to further show the state of the art with respect to saturation conversion and characteristic curves:

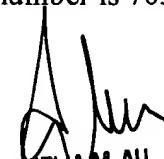
U.S. Pat. No. 6,207,360 to Ishikawa et al., teaches saturation conversion and characteristic curve for image development.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q Le whose telephone number is 703-305-5083. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703-308-6604. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC Customer Service whose telephone number is 703-306-0377.

BL  
June 25, 2003

  
AMELIA M. AU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600